CLAIMS

1. Tyre for vehicle wheels provided with a tread pattern comprising:
   - at least one continuous central circumferential groove straddling the equatorial plane of said tyre,
   - at least two continuous circumferential grooves arranged to the sides of said central groove and having median planes substantially parallel to said equatorial plane,
   - a plurality of transversal grooves delimiting at least four circumferential rows of blocks, two axially internal central rows and two axially external shoulder rows, each block of said central rows being defined by a plurality of sides and by at least four vertices, a pair of front vertices and a pair of rear vertices in relation to a predetermined running direction of said tyre, characterized in that:
     a) the blocks of said central rows comprise a first transversal notch having a terminal end inside the block and a starting end communicating with said central circumferential groove;
     b) said first transversal notch extends beyond the longitudinal median plane of said central rows;
     c) the ratio of the axial width of each central row with the overall axial width of the tread band, measured between the shoulder ends of said tyre, is not less than 0.18;
     d) the transversal grooves of the shoulder rows delimiting the shoulder blocks comprise, at least in the vicinity of the median planes of said lateral circumferential grooves, portions inclined in relation to said equatorial plane in the direction opposite the inclination of the transversal grooves belonging to the blocks of said central rows.

2. Tyre according to Claim 1, characterized in that the front and rear sides of the blocks of the central rows are parallel to each other and inclined in relation to the equatorial plane by an angle (α) of between 30° and 60°.

3. Tyre according to Claim 1, characterized in that the sides of the blocks of the central rows between a front vertex and a rear vertex are parallel to said equatorial plane.

4. Tyre according to Claim 1, characterized in that said first transversal notch forms a predetermined angle (β) with respect to said equatorial plane in the same direction as the angles formed by at least one of said front or rear sides.

5. Tyre according to Claim 1, characterized in that said first transversal notches are of the same dimensions.

6. Tyre according to Claim 1, characterized in that said inclined portions of the shoulder transversal grooves form, in relation to the equatorial plane, an angle (γ) of between 30° and 60°.

7. Tyre according to Claim 1, characterized in that blocks of said central rows comprise a second transversal notch.

8. Tyre according to Claim 1, characterized in that all the blocks of said central rows comprise a first and a second transversal notch.

9. Tyre according to Claim 7 or 8, characterized in that said second transversal notches are identical.

10. Tyre according to Claim 1, characterized in that blocks of said central rows comprise a second transversal notch extending between a terminal end inside said block and a starting end in a position axially opposite said terminal end.

11. Tyre according to Claim 10, characterized in that said starting end of the second transversal notch communicates with the lateral circumferential channel.

12. Tyre according to Claim 10, characterized in that said second transversal notch is inclined with respect to the equatorial plane at an angle (δ) of between 30° and 60°.

13. Tyre according to Claim 1, characterized in that said first transversal notch is rectilinear.

14. Tyre according to Claim 1, characterized in that in each block of the central rows the length of said first transversal notch is not less than 50% of the length of the longer front or rear side.

15. Tyre according to Claim 10, characterized in that said first and second notches are rectilinear and the ratio between the length of the second and of the first transversal notches is between 0.45 and 0.55.

16. Tyre according to Claim 1, characterized in that inclined portions of said shoulder transversal grooves extend and form a second transversal notch inside adjacent blocks belonging to said central rows.

17. Tyre according to Claim 16, characterized in that said inclined portions extend into the central blocks, maintaining the same inclination to the equatorial plane.

18. Tyre according to Claim 10, characterized in that said second and first transversal notches are substantially perpendicular to each other.

19. Tyre according to Claim 10, characterized in that in the blocks of the central rows the distance (d_1) between the terminal end of the first transversal notch and the longitudinal axis of the second transversal notch is between 5 mm and 15 mm.

20. Tyre according to Claim 16, characterized in that said inclined portions of shoulder transversal grooves extend alternatively in the circumferential direction inside blocks of the central rows.

21. Tyre according to Claim 1, characterized in that said shoulder transversal grooves are repeated circumferentially with a predetermined pitch (p).

22. Tyre according to Claim 21, characterized in that said predetermined pitch (p) is between 25 mm and 45 mm for tyres having a circumferential development measured along the equatorial plane of between 1970 and 2010 mm.

23. Tyre according to Claim 21, characterized in that the blocks of the central rows are repeated circumferentially with a pitch which is twice said pitch (p).

24. Tyre according to Claim 21, characterized in that the transversal grooves of the blocks of the central rows and of the shoulder rows are staggered by an amount at least equal to 50% of said pitch (p).

25. Tyre according to Claim 1, characterized in that the blocks of the central rows have a rhomboid shape.

26. Tyre according to Claim 1, characterized in that said first transversal notch lies in a substantially intermediate position in each block.

27. Tyre according to Claim 1, characterized in that said ratio is between 0.40 and 0.50.

28. Premoulded tread band for the re-treading of worn tyres, characterized in that it comprises a tread pattern according to any of the previous Claims.